

*T. Dmytrenko,  
Senior Lecturer at Department of Finance,  
Banking, and Insurance Business of ESIEF of IAPM, the city of Kyiv*

DOI: 10.32702/2306-6814.2018.22.97

## DIGITAL SIGNATURES AND CIRCULATION OF ELECTRONIC PROMISSORY NOTES AS MEANS OF IMPROVING THE FINANCIAL MARKET TRANSPARENCY

*Т. А. Дмитренко,  
старший викладач кафедри фінансів, банківської і страхової справи, ННІМЕФ МАУП, м. Київ*

### ЦИФРОВІ ПІДПИСИ ТА ОБІГ ВЕКСЕЛІВ В ЕЛЕКТРОННІЙ ФОРМІ ЯК ЗАСОБИ ПІДВИЩЕННЯ ПРОЗОРОСТІ ФІНАНСОВОГО РИНКУ

*The paper outlines the necessity of switching the bill circulation into an electronic form for increasing the speed and transparency of operations, preventing the use of bills in criminal and risk operations, including suspicious financial transactions in relation to the risk of legalization (laundering) of proceeds derived from criminal activity. Also, the paper also reveals the issues of the preservation of the exchange law rules, especially the use of electronic signature for the verification of bill transactions. The article presents the international experience of the development of legislation on the bill circulation in electronic form, the experience of other countries in the implementation of these standards in practice.*

*In this paper the measures directed on counteraction to washing of the profits got a criminal way are considered about the financial transaction with using bills of exchange and promissory notes. This article demonstrates that it is possible, through the legislation of digital signatures, for electronic promissory notes to conform to requirements that certain kinds of contracts be memorialized in a writing, signed by the party to be charged, with sufficient content to evidence the contract. On the other hand, most of the European countries and South American countries have adopted the Uniform Law of Geneva for Promissory Notes to regulate this financial instrument. Once again, it will be shown in this paper that the solution proposed here does not negatively affect the parameters of the European Law. Thus, the article recommended mechanisms to accelerate the integration of national financial markets into the global on-demand contemporary global processes.*

*У статті викладено обґрунтування необхідності переходу обігу векселів у електронну форму для підвищення швидкості і прозорості операцій, запобігання використанню векселів в злочинних та ризикових операціях, в тому числі підозрілих щодо ризику легалізації (відмивання) доходів, отриманих злочинним шляхом фінансових операціях. Також у статті розкриті питання збереження норм вексельного права, особливо використання електронного підпису для завірення операцій з векселями. В статті надається міжнародний досвід розвитку законодавства щодо обігу векселів в електронній формі, досвід інших країн щодо впровадження цих норм у практичну діяльність.*

*У статті розглянуто заходи, спрямовані на протидію відмиванню доходів, одержаних злочинним шляхом, щодо фінансових операцій з використанням простих і переказних векселів. У статті продемонстрована можливість через легалізацію цифрових підписів та застосування їх в обігу векселів в електронній формі, дотримання вимог, щоб певні види договорів були зафіксовані у письмовій формі, підписаної стороною, яка підлягає стягненню, з достатнім змістом для підтвердження договору. З іншого боку, більшість європейських країн та країн Південної Америки прийняли Уніфіковану Женевську конвенцію щодо обігу векселів для регулювання цим фінансовим інструментом. Ще раз в статті буде показано, що запропоноване рішення не впли-*

**ває негативно на параметри європейського законодавства. Таким чином, у статті рекомендовано механізми прискорення інтегрування національного фінансового ринку до світового на вимогу сучасним глобалізаційним процесам.**

*Ключові слова: легалізація, відмивання грошей, ризики легалізації (відмивання) доходів, одержаних злочинним шляхом, Векселі, Вексельне право, депозитарна система, підозрілі фінансові операції, документарні фінансові інструменти, електронна форма векселів, електронний підпис.*

*Key words: legalization, money laundering, risks of legalization (laundering) of proceeds derived from criminal activity, bills, exchange law, depository system, suspicious financial transactions, certificated investment instruments, electronic form of bills, electronic signature.*

## PROBLEM STATEMENT

Today in Ukraine, in the view of many enterprises and government authorities, bills are associated as securities, the use of which is related to dubious deals in economic circulation. Indeed, at the end of the past and the beginning of this century, bills were massively used as a barter instrument, dubious bill schemes were popular, and the appearance of Frauds instrument led to the proliferation of fraudulent operations with copies of bills.

The reputation of bills as a "gray instrument" brought the development of the commercial paper market to a standstill. The civilized circulation of bills remained, perhaps, only for financing the agrarian sector with the participation of international partners and organizations, such as the International Finance Company, banking institutions with foreign capital: JSC UkrSibbank (BNP Group), JSC Raiffeisen Bank Aval, PJSC Credit Agricole Bank, and multinational companies, such as BASF, SYGENTA, and MONSANTO [1; 2].

A full circulation of bills has the right to exist only if it becomes transparent and controllable. In the financial system, there is a clear contradiction between the need for instruments of financing the real economy and the impossibility of using them in their current form. This dilemma is soluble on a qualitatively different information-and-technology basis and using the best international experience.

## ANALYSIS OF BASIC RESEARCH AND PUBLICATIONS

The study of the problems of bill circulation in Ukraine, as well as the creation and development of the bill market was conducted by such domestic and foreign scientists, as: A.V. Demkivsky, S.Z. Moshensky, P.P. Tsytyovych, A.B. Avakov, O.I. Baranovsky, M.O. Burmaka, P.Yu. Borodin, S.O. Gutkevich, Yu.M. Lysenkov, V.M. Malyuk, M.O. Mozgovy, T.A. Rudenko, S.M. Rumyantsev, N.M. Feshchenko, O.O. Feldman, V.M. Sheludko, S.M. Barats, I. Fisher, H.F. Shershenevych, A.A. Feldman, Wolters Kluwer, Michael Smith, and others. In their writings, they defined the economic essence of a bill, considered its types and forms, systematized legislation on bill circulation, considered the features of the bill circulation at various stages of its development.

Without diminishing the role and importance of the treatises of these scientists, it should be noted the lack of comprehensive studies on the prevention and counteraction of legalization (laundering) of illegally gained proceeds in assessing the riskiness of bills used by criminals in schemes of legalizing proceeds. In most cases, scientific publications are confined to analyzing the shadow economy and highlighting the problem of money

laundering in this aspect, or to the consideration of the issues of legalization of "criminal" proceeds by criminal groups and the struggle of state structures with this negative phenomenon, its criminal law aspects.

It should be noted that research into the causes and consequences of the use of bills in the schemes for laundering criminal assets is very little involved, especially its theoretical and methodological basis, although this is the main component of countering and combating money laundering and the recommended direction for the development of procedures for countering the legalization (laundering) of proceeds derived from criminal activity by international organizations involved in the specified sphere of regulation and development of the global economy.

Thus, the study of the organizational and legal framework for managing the risks of using bills in criminal schemes of money laundering, as well as preventing and countering money laundering in the financial sector of the economy and developing proposals for their improvement are relevant from a scientific and practical point of view.

The aim of the study is to justify the need to introduce electronic form of bills and transfer existing bills from the documentary form to electronic one in accordance with international recommendations to increase market transparency and reduce its shadow component, modernization of financial instruments regarding the needs of the present — access to cheaper credit resources, solving receivables and payables of enterprises and institutions, overcoming cash gaps, and improving the investment climate in the country.

## THE MAIN RESULTS OF THE STUDY

The fourth industrial digital revolution significantly changes the infrastructure of the economy. Modern technologies that allow for transparency, reliability and speed of information transfer change the paradigm of relations of participants in financial and business operations. As early as 2011, the United Nations Commission on International Trade Law (UNCITRAL) has published a document entitled Legal Issues Related to the Use of Electronic Transferred Records, which concerns order securities, such as bills, bills of lading, and warehouse warrants. It reflects the recommendations for the UN member states containing the principles for the transition of paper circulation from electronic to electronic form [3].

The United Nations Commission (hereinafter referred to as the United Nations Commission) on International Trade Law, Recalling General Assembly Resolution 2205 (XXI) of December 17, 1966, thanks to which the United Nations Commission on International Trade Law was established in order to promote the progressive

harmonization and unification of the law of international trade in the interests of all peoples, especially developing countries, aware that the United Nations Convention on the Use of Electronic Communications in International Treaties (New York, 2005), the UNCITRAL Model Law on Electronic Signatures (2001), and the UNCITRAL Model Law on Electronic Commerce (1996) provide substantial assistance to states in enabling and creating favorable conditions for the use of electronic instruments in the international trade, however, they do not address or fully regulate issues related to the use of electronic transferred records in the international trade, taking into account that problems arising from uncertainty about the legal significance of electronic transferred records constitute an obstacle to the international trade. The UN Commission, convinced that the unification of some rules relating to the legal recognition of electronic transferred records on a technologically neutral basis and using the functional equivalence approach will increase legal certainty and commercial predictability in the field of electronic commerce, recalling that at its forty-fourth session in 2011, it commissioned the Working Group IV (Electronic Commerce) to carry out work in the field of electronic transferred records, having considered a draft model law on electronic transferred records at its fiftieth session in 2017, noting that the draft model law prepared by the working group considers the use of electronic transferred records, equivalent to paper negotiable documents or instruments, and does not concern the use of transferred records, that exist only in electronic form, or transmitted records, negotiable documents, or instruments that are governed by a substantive law that is neutral with respect to the carriers, considers that the typical UNCITRAL law on electronic transferred records will be a useful addition to the current UNCITRAL texts in the field of electronic commerce, because it will provide states with substantial assistance in strengthening their legislation governing the use of electronic transferred records, or developing such legislation if they are not currently in place, and adopts the updated UNCITRAL Model Law on electronic transferred records [4].

In Ukraine, since the adoption of the Law of Ukraine On Amendments to the Tax Code of Ukraine and Some Other Laws of Ukraine Regarding Financial Finance Bills [5] and criticism of the implementation of electronic treasury finance bills by the IMF, applications of electronic working capital payments are not conducted. The main reason for this situation is the wording of Art. 5 of the On the Circulation of Bills in Ukraine Law [6], according to which a bill should be issued only in documentary form, as well as the opacity and imperfection of the mechanism of circulation of finance bills in the above-mentioned law.

Obviously, at the time when Bill Conventions were signed, it was impossible to imagine the circulation of any documents in any format except on paper. Since then, both the methods of information transfer and the methods of recording rights to securities have changed significantly. It is time to introduce amendments in the execution of the letter of the law. For example, the cash turnover in the quality of the discharging the bills practically everywhere was replaced by non-cash settlements, which is not provided for by the Conventions.

In the last decades of the last century, other countries have already created an infrastructure for dematerializing bills. For example, in France, the basis of non-cash circulation of bills in this model is the issuance of a paper document with a blank endorsement, followed by placing it in a depository. Circulation of bills is carried out in the form of movement through custody accounts

In Russia, the idea of a bill in the form of an electronic document was put forward and substantiated in 2002 and incorporated as a standard in the draft Federal Law on Amendments to the Law on the Bills of Exchange and Promissory Note. The project, according to the regulations of the Government of the Russian Federation was defended at the Institute of Legislation and Comparative Law. The draft law was included in the action plan of the Government of the Russian Federation, but was not implemented due to the refusal of the leadership of the Federal Commission for Securities of Russia to coordinate it without any explanation [7, p. 64].

In 2009, based on the developments of the 1990s [8, 9], a scheme for interdepository circulation of bills was proposed, proceeding from the experience of the infrastructure of the American Depository Trust Clearing Company (DTCC) [10]. The scheme is intended primarily for servicing the circulation of bills as commercial papers (immediately after blank endorsement); however, the first endorsements can be made a special one in order to ensure joint liability of several persons. At the same time, it is technologically unimportant in what form the bill is issued — in the form of a paper or electronic document. Therefore, the study of the possibility of circulation of bills in the form of an electronic document without the participation of depositories is of particular relevance.

Currently, the electronic document management is developing at a fast pace. The use of electronic signatures has become commonplace for businesses through interaction with tax and government regulators.

Harmonizing the national legislation with the European one, Ukraine adopted the On Electronic Digital Signature Law (hereinafter referred to as the Law on EDS) in 2003, which introduced the concepts of electronic signature and electronic digital signature in our legal field. Similarly to European legislation, an electronic signature, not even cryptographically protected, began to gain popularity in the Ukrainian business community.

In 2016, the EU Regulation 2014 on electronic identification, verification, and trust services of eIDAS was published to replace the European Directive [10]. In accordance with European trends, the Law on EDS will lose its force on November 7, 2018, and the On Electronic Trust Services Law will come into force (hereinafter referred to as the Law on ETS) [11].

It is clear that the Law on EDS is an implemented eIDAS and a number of provisions are direct translations. This fact should be borne in mind, since it is quite likely that not only the law, but also its interpretation by law enforcement will be taken from European practice. Let's look at some of the main points of the Law of EDS and start with an electronic signature.

The law introduces the concept of electronic signature, advanced electronic signature, and qualified electronic signature. In its simplest form, an electronic signature is electronic data that is added by the signatory to other electronic

data or is associated with it and is used as a signature by him/her. An advanced electronic signature (AES) is an electronic signature that meets the following additional criteria:

- it is formed by cryptographic data transformation with which it is connected using special equipment or software;

- the personal key, which is associated with the signatory and identifies it electronically, is used;

- in case of interference with the integrity of the data, held together by such a signature, such intervention can be clearly detected.

A Qualified Electronic Signature (QES) is a signature that meets all the criteria for AES and, additionally, the following criteria:

- the equipment and/or software with which it is generated is subject to additional requirements (currently, the legislation does not specify which one);

- it is based on a qualified public key certificate.

In addition to the electronic signature, the Law introduces the concept of electronic seal. An electronic seal can also be advanced and qualified — the criteria for these classes are similar to the corresponding criteria for classes of signatures. The difference lies in the fact that an electronic signature can be used by both a legal entity and an individual, and only legal entities can use an electronic seal. There is no significant difference in functionality between the electronic signature and the electronic seal.

Returning to the analysis of the text of the UNCITRAL Convention, the current legislation, and the established rules of office work, it is necessary to highlight the following aspects of the electronic form of bills.

According to experts of electronic document management [12], modern technologies make it possible to almost completely repeat all elements of a bill as an electronic document. Certification of the document and all changes in it should be performed using the enhanced qualified electronic signature (QES) by all participants in the circulation of bills: the drawer, the guarantor of a bill, the acceptor (in the bill of exchange), and the owners of the bills — endorsers.

According to the uniqueness and the uniqueness of the document when creating each electronic document (electronic analogue of a bill), a unique identification number is assigned, and when the QES is applied to a document, the hash function is calculated and the time tag is placed. Through the use of confirming the time tag, it is possible to verify the QES legitimacy at the time of its application, even if it is canceled in the future or it expires. As the document is recycled, when switching to a new owner and certifying an additional QES, additional records are made to the same document (the inscription and signature of the endorser or guarantor of a bill), that is, the unique identification number always indicates clearly both the original version of the document and all its subsequent statuses with preservation of the entire history of the document (bill) and the ability to see the status of the document on any historical date at any time.

As for physical possession of the recommendations of UNCITRAL: "Par. 20. ... The requirement of ownership, combined with the requirement of uniqueness, protects the issuer from multiple liability on the same instrument, helps to give the endorsee (bill holder) guarantees that he/she has acquired an unimpeachable legal title, and protects the endorsee from fraudulent transmission of a duplicate" [4].

The ownership of a bill is confirmed by an endorsement certified by QES with a time tag, a delivery-acceptance act (which is also an electronic document), a mutually certified QES with a time tag, registration of a bill transfer in the system, a technical solution of the document's relevance to the current (last) owner, technical solution to access the current document only the new owner of the bill, and the inability to create a duplicate.

A mandatory element of the transfer of a bill in the form of an electronic document is the delivery-acceptance act on a unified form as an electronic document management, certified by QES. It is this document, signed by both parties, confirms the transfer of the bill to the new owner. An endorsement is a unilateral act. It can be signed before the transfer and then crossed out. One of the documents confirming the ownership of the bill is an act. In the electronic document management system, all signed documents, except the signature itself, have such a parameter as the time of signing, which allows tracking the sequence of transfer of bills in possible disputes between owners.

Creating a full-fledged bill of exchange system in the form of an electronic document that meets all aspects of international law requires changes in legislation — the Law of Ukraine On the Circulation of Bills in Ukraine dated July 4, 2013, No. 407-VII [5] regarding the possibility of circulation of bills in the form of an electronic document, the Law of Ukraine On the Notary dated September 2, 1993, No. 3425-XII [6] in parts of protest a bill.

Revolutionary changes in the scientific and technical structure of the modern economy, recent legislative changes make it possible to radically change the relationship between the financial and real sectors of the economy.

## CONCLUSIONS

Much has been said about cyberspace and its new law. Now that cyberspace is a global environment, it calls for a new law that can provide effective regulation in as many jurisdictions as possible. Links in cyberspace allow users to change from one country to another by clicking a mouse. The new law of cyberspace should be uniform. Electronic promissory note law is an example of a uniform law that will emerge from cyberspace to real space.

This paper examines the use of digital signatures to develop the electronic promissory note. Digital signatures can be used to enable the electronic promissory note. In doing so, e-commerce will have an instrument that securely provides for the worldwide circulation of credit in cyberspace.

The most important in creating a transparent circulation of bills and countering the use of bills in financial transactions of legalizing criminal proceeds is the creation of mechanisms to immobilize bills as a way to absolutely minimize the risks and implement comprehensive administration of bill circulation in Ukraine. The concept of creating a Unified Information System for issuing, circulation, and redemption of the bills has already become an integral Comprehensive Program for Reforming the Financial Sector of Ukraine, a program for the development of the Ukrainian stock market until 2020.

### Література:

1. Вигідні умови вексельного фінансування для українських аграріїв [Електронний ресурс]: інтернет-сайт

Байер Україна. — Режим доступу: [http://www.baier.ua/media/news/2016\\_03\\_14\\_new\\_financial\\_terms.php](http://www.baier.ua/media/news/2016_03_14_new_financial_terms.php)

2. Стратегія розвитку аграрного сектору економіки України на період до 2020 року [Електронний ресурс]: інтернет-сайт Міністерства аграрної політики та продовольства України. — Режим доступу: <http://www.minagro.gov.ua/node/7644>

3. Доклад Рабочей группы по электронной торговле о работе ее сорок пятой сессии (Вена, 10—14 октября 2011 года) [Електронний ресурс]: інтернет-сайт Комиссии Организации Объединенных Наций по праву международной торговли. — Режим доступу: [http://www.uncitral.org/uncitral/ru/commission/working\\_groups/4Electronic\\_Commerce.html](http://www.uncitral.org/uncitral/ru/commission/working_groups/4Electronic_Commerce.html)

4. Типовий закон ЮНСІТРАЛ про електронні передані записи [Електронний ресурс]: інтернет-сайт Комісії ООН по праву міжнародної торгівлі. — Режим доступу: [http://www.uncitral.org/pdf/russian/texts/electcom/MLETR\\_ebook\\_R.pdf](http://www.uncitral.org/pdf/russian/texts/electcom/MLETR_ebook_R.pdf)

5. Міжнародні стандарти: Рекомендації FATF [Електронний ресурс]: інтернет-сайт Державної служби фінансового моніторингу України. — Режим доступу: [http://www.sdfm.gov.ua/articles.php?cat\\_id=180&art\\_id=585&lang=uk](http://www.sdfm.gov.ua/articles.php?cat_id=180&art_id=585&lang=uk)

6. Про обіг векселів в Україні [Електронний ресурс]: Закон України від 04.07.2013 №407-VII. — Режим доступу: <http://zakon2.rada.gov.ua/laws/show/2374-14>

7. Кошель Д.Е. К вопросу о перспективах вексельного обращения в Российской Федерации [Текст] / Д.Е. Кошель // Журнал "Вестник Омского университета. Серия "Право" 2011. — № 2 (27). — С. 59—63.

8. Makeev A.V. Концепция организованного коммерческого кредита и зачета взаимных требований на основе векселя [Текст] / А.В. Makeev // Деньги и кредит. — 1994. — № 3. — С. 54.

9. Познышев С.В. Криминальная психология: Преступные типы. О психологическом исследовании личности как субъекта поведения вообще и об изучении личности преступника в частности. [Текст]: монография / С.В. Познышев. — Л.: Государственное издательство, 1926. — 256 с.

10. Makeev A. V. Самое слабое звено вексельного рынка, или О создании аналога депозитарно-трастовой клиринговой компании (ДТСС) для российского рынка коммерческих бумаг (вексельных программ) [Текст] / А.В. Makeev // Деньги и кредит. — 2006. — Ноябрь.

11. Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market [Електронний ресурс]: eIDAS Regulation (Regulation (EU) N°910/2014). — Режим доступу: <https://ec.europa.eu/futurium/en/content/eidas-regulation-regulation-eu-ndeg9102014>

12. Про електронні довірчі послуги [Електронний ресурс]: Закон України від 05.10.2017 № 2155-VIII. — Режим доступу: <http://zakon5.rada.gov.ua/laws/show/2155-19>

#### References:

1. Bajer Ukraina (2016), "Favorable terms for bills of exchange for Ukrainian agrarians", [Online], vol. 8,

available at: [http://www.baier.ua/media/news/2016\\_03\\_14\\_nev\\_finantsial\\_terms.php](http://www.baier.ua/media/news/2016_03_14_nev_finantsial_terms.php) (Accessed 14 Mar 2014).

2. The official site of the Ministry of Agrarian Policy and Food of Ukraine (2013), "Strategy for the development of the agrarian sector of Ukraine's economy for the period up to 2020", available at: <http://www.minagro.gov.ua/node/7644> (Accessed 07 Nov 2018).

3. The official site of the United Nations Commission on International Trade Law (2011), "Report of the Working Party on Electronic Commerce on the work of its forty-fifth session", Vienna, 10-14 October, available at: [http://www.uncitral.org/uncitral/ru/commission/working\\_groups/4Electronic\\_Commerce.html](http://www.uncitral.org/uncitral/ru/commission/working_groups/4Electronic_Commerce.html) (Accessed 07 Nov 2018).

4. The official site of the UN Commission on International Trade Law (2017), "UNCITRAL Model Law on Electronic Transmission Records", available at: [http://www.uncitral.org/pdf/russian/texts/electcom/MLETR\\_ebook\\_R.pdf](http://www.uncitral.org/pdf/russian/texts/electcom/MLETR_ebook_R.pdf) (Accessed 07 Nov 2018).

5. The official site of State Financial Monitoring Service of Ukraine (2018), "International Standards: FATF Recommendations", available at: [http://www.sdfm.gov.ua/articles.php?cat\\_id=180&art\\_id=585&lang=uk](http://www.sdfm.gov.ua/articles.php?cat_id=180&art_id=585&lang=uk) (Accessed 07 Nov 2018).

6. The Verkhovna Rada of Ukraine (2013), The Law of Ukraine "On the circulation of bills in Ukraine", available at: <http://zakon2.rada.gov.ua/laws/show/2374-14> (Accessed 07 Nov 2018).

7. Koshel', D.E. (2011), "On the issue of prospect of a bill circulation in the Russian Federation", Zhurnal "Vestnyk Omskoho unyversyteta. Seryia "Pravo", vol. 1, pp. 59—63.

8. Makeev, A. V. (1994), "The concept of an organized commercial loan and the offsetting of mutual claims on the basis of a bill", Den'hy y kredyt, vol. 1, p. 54.

9. Poznyshch, S.V. (1926), Kriminal'naja psihologija: Prestupnye tipy. O psihologicheskom issledovanii lichnosti kak sub#ekta povedenija voobshhe i ob izuchenii lichnosti prestupnika v chastnosti. [Criminal Psychology: Criminal Types. On the psychological study of personality as a subject of behavior in general and on the study of the identity of the offender in particular.], Gosudarstvennoe izdatel'stvo, Moscow, Russia.

10. Makeev, A. V. (2006), "The weakest link in the bill market, or About the creation of an analogue of the Depository Trust Clearing Company (DTCC) for the Russian market of commercial papers (bills of exchange)", Den'gi i kredi., vol. 1.

11. The official site of the European Parliament and of the Council (2014), "Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market", available at: <https://ec.europa.eu/futurium/en/content/eidas-regulation-regulation-eu-ndeg9102014> (Accessed 07 Nov 2018).

12. The Verkhovna Rada of Ukraine (2013), The Law of Ukraine "About electronic trust services", available at: <http://zakon5.rada.gov.ua/laws/show/2155-19> (Accessed 07 Nov 2018).

*Стаття надійшла до редакції 08.11.2018 р.*